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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/018,018 | 04/22/2002 | Karen Briley-Saebo | NIDN-10427 | 3572 |
| 36335 | 7590 | 04/21/2006 | | EXAMINER |
| GE HEALTHCARE, INC. IP DEPARTMENT 101 CARNEGIE CENTER PRINCETON, NJ 08540-6231 | | | SMITH, RUTH S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3737 | |

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|---------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/018,018 | BRILEY-SAEBO ET AL. |
| | Examiner Ruth S. Smith | Art Unit 3737 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 March 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 14-30 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 14-30 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on March 24, 2006 has been entered.

Claim Objections

Claims 14-30 are objected to because of the following informalities: In claim 14, line 5, "the blood pool contrast agent" lacks antecedent basis. In claim 27, it appears that "and" on line 2 should be "or" in that only one procedure can be used at a time. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 28-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The meaning of claim 28 is unclear. It is unclear as to how one uses both small flip angles and large flip angles to obtain the image.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-15, 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuhn. The claims are directly readable on Kuhn which discloses MR imaging whereby

a catheter filled with a blood pool contrast agent (column 6, lines 20-35) is placed into the vasculature of a patient and an MR image of at least a part of the body containing the catheter is generated. When the catheter reaches its desired location the contrast agent is then injected into the arteries surrounding the catheter and an image is obtained. The image of the contrast agent surrounding the catheter tip would inherently allow the catheter to be visualized due to its lack of signal in the image obtained. With respect to claim 25, this limitation is inherent in the method disclosed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhn in view of Gunther et al. Kuhn discloses MR imaging whereby a catheter filled with a blood pool contrast agent (column 6, lines 20-35) is placed into the vasculature of a patient and an MR image of at least a part of the body containing the catheter is generated. When the catheter reaches its desired location the contrast agent is then injected into the arteries surrounding the catheter and an image is obtained. The image of the contrast agent surrounding the catheter tip would inherently allow the catheter to be visualized due to its lack of signal in the image obtained. Kuhn fails to specifically disclose the blood pool contrast agents used. Gunther et al disclose MR blood pool contrast agents. The contrast agents are as set forth in claims 16-19. It would have been obvious to one skilled in the art to have modified Kuhn such that the blood pool contrast agents used are those disclosed by Gunther et al. Such a modification merely involves the selection of a known type of blood pool contrast agent for those used in the method of Kuhn. With respect to claims 20-24, Gunther et al discloses the use of these

materials and positive and negative contrast agents which use differences in T1 and T2 as set forth.

Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhn in view of Ericcson et al. Kuhn discloses MR imaging whereby a catheter filled with a blood pool contrast agent (column 6, lines 20-35) is placed into the vasculature of a patient and an MR image of at least a part of the body containing the catheter is generated. When the catheter reaches its desired location the contrast agent is then injected into the arteries surrounding the catheter and an image is obtained. The image of the contrast agent surrounding the catheter tip would inherently allow the catheter to be visualized due to its lack of signal in the image obtained. Kuhn fails to specifically disclose the specific types of imaging sequences set forth. The use of the specific types of imaging sequences set forth in claims 26-27 are old and well known and taught for example by Ericcson et al. It would have been obvious to one skilled in the art to have modified Kuhn such that the imaging sequences used are as taught by Ericcson et al. Such a modification merely involves the selection of a known type of imaging sequences used in MR contrast enhanced imaging.

Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhn in view of Prince ('619) and Filler et al. Kuhn discloses MR imaging whereby a catheter filled with a blood pool contrast agent (column 6, lines 20-35) is placed into the vasculature of a patient and an MR image of at least a part of the body containing the catheter is generated. When the catheter reaches its desired location the contrast agent is then injected into the arteries surrounding the catheter and an image is obtained. The image of the contrast agent surrounding the catheter tip would inherently allow the catheter to be visualized due to its lack of signal in the image obtained. Kuhn fails to specifically disclose the specific types of contrast agent and imaging parameters. Prince discloses MR imaging using a blood pool contrast agent and small flip angles combined with short echoes as well as sequences that employ larger flip angles and longer echo times. Filler et al disclose the use of a blood pool contrast agent that

includes an iron oxide. It would have been obvious to one skilled in the art to have modified Kuhn such that the contrast agent includes iron oxide and the flip angles are between 20 and 90 degrees with echo times being less than 10 ms. Such a modification merely involves the selection of known types of blood pool contrast agents and known imaging sequences used in contrast enhanced MR imaging procedures.

Response to Arguments

Applicant's arguments with respect to claims 14-30 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth S. Smith whose telephone number is 571-272-4745. The examiner can normally be reached on M-F 7:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ruth S. Smith
Primary Examiner
Art Unit 3737